

THE DISCOVERY OF ELEMENT 110 AND THE VERIFICATION OF A CLOSED NEUTRON SHELL AT $N=162$. J.W. Wild, R.W. Lougheed, and K.J. Moody, Lawrence Livermore National Laboratory, P.O. Box 808, L-231, Livermore, CA 94551; Yu.A. Lazarev, Yu.V. Lobanov, Yu.Ts. Oganessian, V.K. Utyonkov, F.Sh. Abdullin, A.N. Polyakov, J. Rigol, I.V. Shirokovsky, Yu.S. Tsyganov, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, B.N. Gikal, V.B. Kutner, A.N. Mezentsev, and K. Subotic, Joint Institute for Nuclear Research, Dubna, Russia, 141980.

In this paper, we discuss the experiments leading up to and including the discovery of the isotope $110-273$, and the importance of this nuclide in deducing the decay properties of nuclei in this region through the establishment of a closed neutron shell at $N=162$. This shell and the closed proton shell at $Z=108$ are responsible for an enhancement in stability against spontaneous fission decay of several orders of magnitude.

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